



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION



PAUL R. LEPAGE
GOVERNOR

PAUL MERCER
COMMISSIONER

IN THE MATTER OF:

**Westbrook Energy Center, LLC
Cumberland County
Westbrook, Maine
A-743-75-H-X**

**Departmental
Findings of Fact and Order
Property Tax
Exemption Certification**

In making tax exemption certification decisions, the Department's responsibility is to determine whether an item is eligible for certification pursuant to the laws of the State of Maine. In a case where an exemption certification is approved, Municipal tax assessors have the responsibility of determining the amount of reduction of property tax.

After review of the tax exemption certification application and supporting documents, pursuant to Maine's Property Tax Law, 36 M.R.S.A. §§ 655(1)(N) and 656(1)(E)(2), and the Department of Environmental Protection's (Department) *Rules for the Processing of Applications*, 06-096 CMR 2, the Department has considered the application of Westbrook Energy Center, LLC (WEC), with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

1. APPLICATION SUMMARY

A. History

Westbrook Energy Center, LLC (WEC) owns and operates a 553.5 MW natural gas combined cycle power generation facility located at 60 Eisenhower Drive, Westbrook, Maine. Operation of this facility requires Department licensing of, among other things, air pollutant emissions.

B. Application

On December 15, 2015 WEC filed an application seeking property tax exemption for the following equipment:

1. Dry Low NO_x Systems for Combustion Turbines #1 and #2
2. Selective Catalytic Reduction Systems for Combustion Turbines #1 and #2
3. Cooling Tower Drift Eliminators
4. Environmental Paving and Stabilization

The application was deemed complete for processing by the Department on December 18, 2015.

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2. FINDINGS OF FACT

A. Decision Making Process.

The decision as to whether a facility is eligible for exemption is made by determining the facility's "primary purpose". That determination is made as follows:

1. If the facility serves no pollution control function, then the primary purpose is not pollution control and the exemption is denied.
2. If the facility serves dual or multiple functions, the "primary" function must be determined.
3. If the facility's only function or its primary function is pollution control, then the primary purpose of the facility is pollution control and exemption must be granted.
4. If pollution control is merely a secondary function, then other factors, including taxpayer motivation, must be considered.
5. If the primary motivation for installation of the facility is pollution control, then the Department may conclude that the primary purpose is pollution control and exemption may be granted.
6. If neither the primary function nor the primary motivation is determined to be pollution control, then the primary purpose cannot be pollution control and the exemption is denied.

B. Functions.

1. Dry Low NO_x Systems for Combustion Turbines #1 and #2

Nitrogen Oxide (NO_x) is formed in the combustion turbines through thermal dissociation and subsequent reaction of nitrogen and oxygen in the combustion air. The rate of NO_x formation is highly dependent upon the stoichiometric ratio, combustion temperature, and residence time at the combustion temperature. Maximum NO_x formation occurs near the stoichiometric air-to-fuel mixture ratio since combustion temperatures are greatest at this air-to-fuel ratio.

The Dry Low NO_x (DLN) systems incorporate a mechanical design within the fuel and air injection components of Combustion Turbines #1 and #2 as well as combustion chamber liners and electronic combustion controls to allow for optimal air/fuel mixing for the minimization and control of NO_x formation during combustion.

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The Department finds that the primary function of the DLN system is to deliver fuel for combustion. The Department further finds that the reduction of emissions of NO_x is a secondary function of the DLN system. NO_x is an air pollutant as defined in Definitions Regulation, 06-096 CMR 100.

All associated piping, electrical, concrete, insulation, and structural installations necessary for the construction and operation of the DLN systems are also considered part of this facility.

The DLN systems are not facilities "such as an air conditioner, dust collector, fan or similar facility designed, constructed or installed solely for the benefit of the person for whom installed or the personnel of such person" (or company) and they were not designed or installed for the reduction or control of automobile exhaust emissions.

2. Selective Catalytic Reduction Systems for Combustion Turbines #1 and #2

NO_x is formed in the combustion turbines through thermal dissociation and subsequent reaction of nitrogen and oxygen in the combustion air. Each exhaust from Combustion Turbines #1 and #2 is directed to a Selective Catalytic Reduction (SCR) system.

SCR reduces NO_x emissions through the injection of ammonia in the gas exhaust stream in the presence of a catalyst to produce nitrogen and water. The reduction is considered "selective" because the catalyst selectively targets NO_x reduction in the presence of ammonia. The major components of an SCR system are a reagent storage tank, metering and distribution modules, injectors, and the catalyst bed.

The Department finds that the primary function of the SCR systems is to reduce emissions of NO_x. NO_x is an air pollutant as defined in Definitions Regulation, 06-096 CMR 100.

All associated piping, electrical, concrete, insulation, and structural installations necessary for the construction and operation of the SCR systems are also considered part of this facility.

The SCR systems are not facilities "such as an air conditioner, dust collector, fan or similar facility designed, constructed or installed solely for the benefit of the person for whom installed or the personnel of such person" (or company) and they were not designed or installed for the reduction or control of automobile exhaust emissions.

3. Cooling Tower Drift Eliminators

WEC operates a wet mechanical cooling tower to transfer waste heat from cooling water to the atmosphere. Cooling water is used to cool and condense steam exiting the steam turbine.

The Cooling Tower functions by spraying cool water over a column of packing, while a fan draws air up through the packing to promote evaporative cooling. During the process, water mist droplets can become entrained in the circulating air and get discharged to the atmosphere. The 'drift' droplets can be a source of particulate matter emissions as the water evaporates and the dissolved salts in the water solidify.

WEC minimizes emissions from the Cooling Tower by the use of Drift Eliminators within the tower to capture the mist and droplets from the air stream before exiting the tower, subsequently reducing emissions of particulate matter (PM).

The Department finds that the primary function of the Cooling Tower Drift Eliminators is to reduce emissions of particulate matter. Particulate Matter is an air pollutant as defined in Definitions Regulation, 06-096 CMR 100.

All associated piping, electrical, concrete, insulation, and structural installations necessary for the construction and operation of the Cooling Tower Drift Eliminators are also considered part of this facility.

The Cooling Tower Drift Eliminators are not facilities "such as an air conditioner, dust collector, fan or similar facility designed, constructed or installed solely for the benefit of the person for whom installed or the personnel of such person" (or company) and they were not designed or installed for the reduction or control of automobile exhaust emissions.

4. Paving and Road Stabilization

WEC has installed a total of 143,126 square feet of paving and gravel stabilization in vehicular traffic areas and for equipment access in and around the facility. If regularly swept and maintained, the paving of roadways can have the effect of reducing fugitive emissions of particulate matter. However, the Department finds that the primary function of the paving and gravel stabilization is to provide a solid, durable surface as well as access to buildings, public roads, parking, etc. Therefore, pollution reduction is found to be a secondary function.

C. Motivation for Installation.

1. Dry Low NO_x Systems for Combustion Turbines #1 and #2

The Department finds that the primary motivation for the installation of the DLN systems was for the purpose of reducing formation of NO_x, an industrial air pollutant. No other information in the application or known to the Department demonstrates an additional motivation for installation.

2. Selective Catalytic Reduction Systems for Combustion Turbines #1 and #2

Since the primary function of the SCR systems is pollution control, it is not necessary to evaluate the motivation for installation of this equipment.

3. Cooling Tower Drift Eliminators

Since the primary function of the Cooling Tower Drift Eliminators is pollution control, it is not necessary to evaluate the motivation for installation of this equipment.

4. Paving and Road Stabilization

The Department finds that the primary motivations for the installation of the paved and stabilized road surfaces are to provide solid, reliable access to the facility and to minimize road maintenance activities. Reduction of fugitive emissions of particulate matter is found to be a secondary motivation for installation.

Based on the Findings of Fact in this Order, the Department makes the following CONCLUSIONS:

1. The Department hereby finds that the equipment listed in Sections 1(B)(1), (2), and (3) above are air pollution control facilities qualifying for exemption from property tax pursuant to 36 M.R.S.A., Section 656 (1)(E)(2).
2. The Department hereby finds that the equipment listed in Section 1(B)(4) above is not an air pollution control facility qualifying for exemption from property tax pursuant to 36 M.R.S.A., Section 656 (1)(E)(2).

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THEREFORE, the Department APPROVES the equipment listed in Sections 1(B)(1), (2), and (3) above but DENIES the equipment listed in Section 1(B)(4) as explained above as described in the application of WEC.

DONE AND DATED IN AUGUSTA, MAINE, THIS 23 DAY OF March, 2016.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Marie Allen Robert Come for
PAUL MERCER, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 12/15/15

Date of application acceptance: 12/18/18

Date filed with the Board of Environmental Protection:

This Order prepared by Lynn Muzzey, Bureau of Air Quality.

